

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A system for piercing dermal tissue, the system comprising
a skin-piercing element configured for penetrating into dermal tissue;
at least one electrical outer skin pressure contact; and
a meter configured for measuring an electrical characteristic existent between the
skin-piercing [skin piercing] element and the at least one electrical outer skin pressure contact
through the dermal tissue that is indicative of dermal tissue penetration depth by the skin-
piercing element when the system is in use.
2. Canceled
3. Canceled
4. (Currently Amended) The system of claim 1, wherein the meter is configured to
measure an electrical characteristic between the skin-piercing element and the at least one
electrical outer skin pressure contact that is indicative of a stability of dermal tissue
penetration by the skin-piercing element.
5. (Currently Amended) The system of claim 1, wherein the meter is configured to
measure an electrical characteristic between the skin-piercing element and the at least one
electrical outer skin pressure contact that is indicative of dermal tissue penetration residence
time by the skin-piercing element.
6. (Currently Amended) The system of claim 1, wherein the electrical characteristic is
the electrical resistance between the skin-piercing element and the at least one electrical outer
skin pressure contact.

7. (Currently Amended) The system of claim 1, wherein the electrical characteristic is the electrical impedance between the skin-piercing element and the at least one electrical outer skin pressure contact.
8. (Currently Amended) The system of claim 1, wherein the at least one electrical outer skin pressure contact includes a first electrical contact and a second electrical contact.
9. (Original) The system of claim 8, wherein the meter is further configured for measuring an electrical characteristic existent between the first and second electrical contacts.
10. (Currently Amended) The system of claim 1, wherein the meter includes a pressure/contact ring and the at least one electrical outer skin pressure contact is integrated with the pressure/contact ring.
11. (Original) The system of claim 1, wherein the skin-piercing element is a micro-needle.
12. (Original) The system of claim 11, wherein the micro-needle is a component of an integrated micro-needle and biosensor medical device.
13. (Currently Amended) A system for piercing dermal tissue, the system comprising
a skin-piercing element configured for penetrating into dermal tissue;
a first electrical outer skin pressure contact;
a second electrical outer skin pressure contact; and
a meter configured for measuring an electrical characteristic existent between the skin-piercing [skin piercing] element and the first and second electrical contacts through the dermal tissue that is indicative of dermal tissue penetration depth by the skin-piercing element when the system is in use.

14. (Currently Amended) The system of claim 13, wherein the electrical characteristic is the electrical impedance between the skin-piercing element and both of the first and second electrical outer skin pressure contacts.
15. (Currently Amended) The system of claim 13, wherein the meter includes a pressure/contact ring and the first and second electrical outer skin pressure contacts are integrated with the pressure/contact ring.
16. (Original) The system of claim 13, wherein the skin-piercing element is a micro-needle.
17. (Original) The system of claim 16, wherein the micro-needle is a component of an integrated micro-needle and biosensor medical device.
18. Canceled.
19. (Currently Amended) A method for piercing dermal tissue comprising:
contacting dermal tissue with at least one electrical outer skin pressure contact; and
inserting a skin-piercing element into the dermal tissue while measuring an electrical characteristic existent between the skin-piercing element and the at least one electrical outer skin pressure contact through the dermal tissue that is an indicator of dermal tissue penetration depth by the skin-piercing element, thereby penetrating into the dermal tissue.
20. (Original) The method of claim 19 further including the step of presenting a user with an indicator of a dermal tissue penetration depth of the skin-piercing element, said indicator being based on the measured electrical characteristic.
21. (Original) The method of claim 19 further including the step of presenting a user with an indicator of a dermal tissue penetration stability of the skin-piercing element, said indicator being based on the measured electrical characteristic.

22. (Original) The method of claim 19 further including the step of presenting a user with an indicator of dermal tissue penetration residence time of the skin-piercing element, said indicator being based on the measured electrical characteristic.
23. (Original) The method of claim 19, wherein the inserting step includes inserting a micro-needle skin-piercing element.
24. (Currently Amended) The method of claim 19, wherein the inserting step includes inserting a micro-needle of an integrated micro[n]-needle and biosensor medical device.
25. (Currently Amended) The method of claim 19, wherein the inserting step further involves measuring the electrical characteristic prior to contact between the skin-piercing element and the dermal tissue, when the skin-piercing element has contacted the dermal tissue and when the skin-piercing element has penetrated into the dermal tissue.
26. (Original) The method of claim 19, wherein the measuring is accomplished by applying a current in the range of 1mA to 10 mA.
27. (Original) The method of claim 19, wherein the measuring is accomplished using a potential frequency in the range of 10 KHz to 1 MHz, where the low end of the frequency prevents user discomfort and the high end of the frequency minimizes stray capacitance from being measured.